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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,122	05/05/2005	Andreas Csaba Szentistvany	URQU.P-014	2656
<div>57381 7590 06/26/2007 Marina Larson & Associates, LLC P.O. BOX 4928 DILLON, CO 80435</div>				
			<div>EXAMINER KRUER, STEFAN</div>	
			<div>ART UNIT 3654</div>	<div>PAPER NUMBER</div>
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,122

Applicant(s)

SZENTISTVANY, ANDREAS
CSABA

Examiner

Stefan Kruer

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 14 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 - 14 is/are allowed.
- 6) ☒ Claim(s) 1 - 12 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 8 and 15 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson (GB 2,339,419 A) in view of Jones et al (GB 2,322,450 A).

Re: Claim 1, Watson discloses:

- a stair lift (not depicted) including a stair lift rail (2),
- a carriage (1) mounted on said rail for movement there along,
- an over-speed braking means (in part 8, 20) to brake said carriage along said rail when the speed of said carriage exceeds a pre-determined value (Page 7, Line 12);

however, Watson is silent regarding a chair, its mounting on said carriage and an angle determining means.

Attention is directed to Jones et al who teach a dynamic modeling of their stair lift chair (A, Fig. 7) pivotally mounted on said carriage, whereby the pivoting occurs about "the axis of rotation -P- ... the centre of the bearing about which the seat frame rotates" (Page 6, Line 11), and an angle determining means (C), whereby a "...control loop maintains the... assembly as near as possible to the vertical plane throughout the travel of the stair lift ... to ensure suitable safety..." (Page 4, Line 3). Jones et al teach further that deviation beyond a set range should therefore lead to engagement of a brake (Page 4, Line 12).

It would have been obvious to one having ordinary skill in the art to modify the invention of Watson with the teaching of Jones et al to provide a stair lift having suitable safety means to prevent the potential of discomfort to, or ejection of, the passenger.

Re: Claim 2, Watson discloses his an over-speed braking means comprising a speed sensing means (5 – 7), to electronically sense the speed of said carriage.

Re: Claim 3, Watson discloses his speed sensing means comprising a roller (3) for engagement with said rail, and having means to determine the speed of rotation (5 – 7) of said roller.

Re: Claim 4, it would have been an obvious matter of design choice to provide an electromagnetic sensor of the instant invention in lieu of the optical sensor of Watson, since applicant has only stated a preference for an electromagnetic sensor (Page 5, Line 3), yet has not disclosed that such sensor solves any stated problem. It appears that the invention would perform equally well with an optical sensor.

Re: Claims 5 and 15, Watson discloses his speed output signal indicating a speed, said output signal compared to a pre-determined maximum carriage speed, and, in the event said output signal exceeds said pre-determined speed, said over-speed braking means (in part 8) triggers a command signal to a solenoid, thereby causing a brake member (20) to engage with said rail.

Re: Claims 6 and 16 - 19, Watson discloses his microprocessor (8) as a component of his over-speed braking means, said microprocessor being programmed (Pages 5 and 6, Lines 12 and 27, respectively) to receive an output signal regarding speed and, in response to said output signal indicate a speed for comparison to a pre-determined carriage speed, whereby a command signal to a solenoid (27) is generated if the speed is in excess of pre-determined carriage speed.

Re: Claim 7, Watson discloses his microprocessor (8) programmed for receiving and generating a speed output signal and a command signal to said solenoid, respectively, for the engagement of his braking member (20); however, he is silent regarding angle determining means.

As reviewed in Claim 1, Jones et al teach their angle determining means (C) and the engagement of their brake should their chair angle exceed a pre-determined angle (Page 4, Line 11), in keeping with their recommendation for “suitable safety circuits”.

It would have been obvious to one having ordinary skill in the art to modify the reference of Watson with the teaching of Jones et al to provide a stair lift having a programmable logic controller to accommodate multiple sensors for the benefits of a more encompassing safety control scheme, greater applicability and a common interface.

Re: Claim 8, Watson discloses:

- a stair lift rail (2),
- a carriage (1) mounted on said rail for movement there along,
- a braking means (in part 8, 20) to brake said carriage along said rail,
- speed sensing means (5 – 7),
- and control means including a microprocessor (8) operable to receive signals from said speed sensing means, compare said signals to a pre-determined maximum, and generate a command signal to operate a braking means (in part 20, 27).

however, Watson is silent regarding a chair, an angle determining means and different angles of said rails.

Attention is directed to Jones et al who teach an angle determining means (C) for producing a signal of angular displacement of their stair lift chair (A, Fig. 7) and a control loop to compare such to a pre-determined range, whereupon said displacement is in excess of said range, "...some sort of brake is engaged" as a recommended means "...to ensure suitable safety..." (Page 4, Line 12). Furthermore, Jones et al teach the need for their angular determining means "when the carriage changes from one gradient to another..." (Page 1, Line 10).

It would have been obvious to one having ordinary skill in the art to modify the invention of Watson with the teachings of Jones et al to provide a stair lift having suitable safety means as afforded by conventional control systems, as well as the ability to accommodate change(s) in grade.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gisske et al in view of Bartlet (5,230,405).

Re: Claim 11, Gisske et al disclose:

- a drive motor (25) to drive a carriage (22) along a rail (not depicted),
- an over-speed governor (112 in combination with 42) operable to brake said carriage with said rail (Col. 7, Line 61),
- limit engagement means (60, 58) operable independently of said over-speed governor and positioned to engage limit stops at each end of the rail (14, 16),
- and wherein said over-speed governor and said limit engagement means actuate a common isolation switch (not depicted, internal to controller) to disengage the drive motor;

however, Gisske et al disclose their limit stops (60) comprising infrared transmitters as a component of their inventive means to reduce wiring and afford greater flexibility to their installation.

Attention is directed to Bartlet who teaches their limit engagement means (107, 105) positioned to physically engage ultimate stops (103, 107) provided at each end of his rail (102), wherein said ultimate stops physically prevent displacement of said carriage from said rail and said limit engagement means cut power to his drive motor (170, Col. 5, Line 32).

It would have been obvious to one of ordinary skill in the art to modify the reference of Gisske et al with the teaching of Bartlet to utilize ultimate stops physically preventing further movement of a chair lift in combination with mechanical limit engagement means to actuate an isolation switch common to both the limit engagement means and over-speed governor with which power to a drive motor is interrupted, for purpose of safety.

Re: Claim 12, Gisske et al disclose their carriage as powered by a battery (74), however they are silent as to their charging means.

Bartlet, however, teaches his limit engagement means (107, 105) conveying a charging current from his rail (102) to a battery (250) located within his carriage (104), for charging his battery when said carriage is at each end of said rail.

It would have been obvious to one having ordinary skill in the art to modify the invention of Gisske et al with the teaching of Bartlet to enable charging of the battery at the landings for points affording sufficient time for recharging.

Regarding Claim 9, the components of Claim 9 would necessarily have to interact in order for the device to function. It would have been obvious to perform all the method steps of claim 9 when actuating the device of Watson as modified by Jones et al above, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond actuating each of the components.

Regarding Claim 10, the need to test primary components, control units and their interaction is well known to the art and critical in quality control, particularly prior to commissioning of equipment. It would have been obvious to perform all the method steps of claim 10 when producing the devices of Gisske et al as modified by Bartlet above, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond the cooperation by each of the components.

Allowable Subject Matter

Claims 13 - 14 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 13 contains allowable subject matter because the teachings of the prior art of record taken as a whole do not show or render obvious the combination set forth including the "...when said carriage is stationary, said solenoid may be energized and de-energized without causing displacement of said braking member..."

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to Claims 1, 10 and 11 filed 2 April 2007 have been fully considered but they are not persuasive.

With respect to Claim 1 and the brake of Jones, the brake is to be engaged once an excessive angle of deviation of his chair has been reached; thereby stating an ultimate, corrective measure for purpose of safety. Jones, therefore, introduces the concept of braking should the chair, while following the changing gradient as designed for "normal stairlift operating speeds", be displaced beyond a set (maximum) angle of deviation. The action of braking as an additional safety means to the inadequate corrective action by a seat-leveling unit during excessive displacement is in keeping with overcoming undesirable speed or acceleration.

Furthermore, with respect to Claim 1 and Jones, the claim language cites an angle determining means being *capable of causing* actuation of said over-speed braking means, which is within the disclosure of Jones in which the use of control algorithms, sensors and safety circuits are reviewed with the recommendation of engagement of a brake should the displacement angle of the seat exceed a specified range.

Applicant has made reference to an earlier US Patent 5,720,364 (Glover), which has been reviewed and in which a disablement of a stairlift by a safety arrangement once a seat has tilted beyond a pre-determined angle (Col. 3, Line 38) has been noted. (It should be mentioned that this reference was not included in applicant's information disclosure statement.)

With respect to the arguments pertaining to Claim 11, Gisske et al disclose a control scheme in which the use of limit engagement means and limit stops in engaging/disengaging an over-speed governor and drive is reviewed. It is true that Gisske et al disclose the use of wireless limit stops and limit engagement means; however, the interaction of these devices in conjunction with the over-speed governor and drive is disclosed.

With respect to the existence of a common isolation switch internal to the controller of Gisske et al, the controller is a microprocessor having micro-controllers of which one is positioned within the motor drive unit and inherently has common switching for disengagement of the motor upon inputs from numerous sensors, etc.

Finally, with respect to claim 10, programmable (local) control systems, even when tailored to specific applications/installations, undergo testing and start-up procedures. In that the prior art anticipates the flexibility of having programming features that can be optionally selected in the field, field- and factory testing are inherent to the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dooley (4,174,823) and Kasbergen et al (WO 99/29611) are cited respectively for reference of a stairlift having a safety interlock whereby the lift is stopped if "...tipping or other orientation changes take place..." and a stairlift in which on-site programming and calibration is reviewed and seat displacement is monitored, with resulting disengagement of a carriage drive and/or "horizontal-keeping mechanism" should the degree of seat displacement and the timely ability for corrective response(s) exceed pre-determined ranges.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M - F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571.272.6911. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

SHK

19 June 2007


GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER